	Extreme Engineering 9198-B Ridge Road Newcastle CA, 95658 USA Phone: 916/663-1560 Fax: 916/663-9249 info@extremeengineering.com	Bulletin No:001
		Release Date:04/28/04
		Effective Date:04/28/04
		Supersedes: N/A
		Completion Date:
		Page: 1 of 2
<h1>SERVICE BULLETIN</h1>		
Ride Manufacture: Extreme Engineering	Affected Production Date: All AB-34 and AB-44	
Ride Name: AB-34 and AB-44 auto belays.	Affected Serial Nos.: All	
Model Number: AB-34, AB-44		
Abstract Of Issue:		
Systems must have the proper amounts of fluid to operate safely. To prevent any issues the following bulletin is being sent. The following details must be checked. Any questions, please refer to on-line manuals @ www.extremeengineering.com or contact us at (916) 663-1560.		
<ul style="list-style-type: none"> • Fluid level of tank • Loose and or missing parts • Cable installation • Cable condition • <i>Recommended mounting methods of belay in the box.</i> 		
Reason For Release:		
To ensure that products in service are safe to operate.		
<p>Action To Be Taken: Check fluid levels in all auto belay tanks. All models AB-34 (eight foot long box) must have a minimum of 4 quarts maximum of 6 quarts of Dextron 3/Mercron ATF. Models AB-44 must have minimum of 6 quarts and maximum of 8 quarts. If ever-in doubt of fluid levels, system must be drained and refilled with correct amount of Dextron 3/Mercron ATF fluid.</p> <p>To check proper tank level; Allow cable to fully retract to top of wall. (Attach rope for retrieval) Site-glass type tank, look into site glass with bright flashlight if reddish fluid is visible system level is correct. Non-site glass type, Release all air pressure from tank by removing air valve with removal tool. NEVER remove any fitting or hose from system without first releasing all system pressure. Remove gauge from tank top using a 14mm wrench. Using a clean wire (32" long) as a dip stick insert to tank bottom. For proper level 3" to 6" of fluid must be present. Seal and install gauge.</p> <p>System Pressures; AB-34 55 PSI to 65 PSI AB-44 75 PSI to 85 PSI Or as marked/tagged on specific system.</p> <p>All fasteners, snap-rings, clips, lids, caps, hoses must be properly installed and operational. No loose parts/pieces allowed.</p> <p><i>Any oil or leaks must be investigated and stopped before product can be used.</i> Before pressure is added to system correct oil level must be confirmed. All Auto Belay of this model must adhere to mounting specifications out-lined in manual, DO NOT WELD on housing! Cabels must be in excellent condition and installed correctly.</p>		
Detail of Issue: Debris/oil on floor, Missing/loose parts, welded not bolted as required, cable installed backwards.		

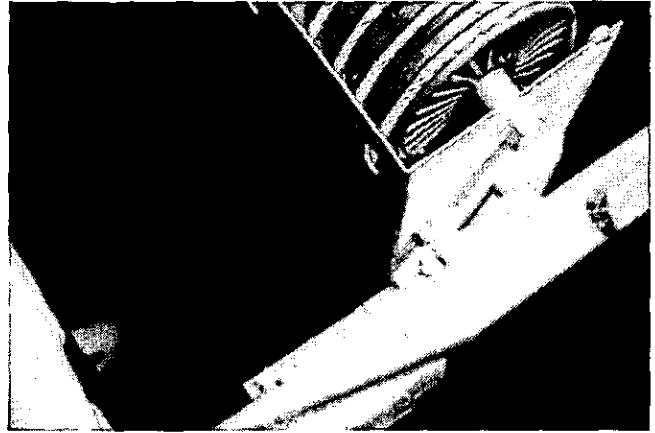
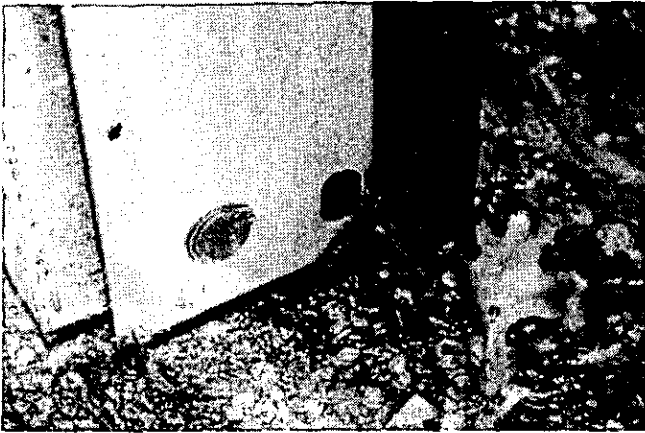


Fig. A1.2 Service Bulletin



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SAFETY TIP 11

Anchor Bolt Issue, New Product Update

Information written by Phillip Wilson. Provided by: Extreme Engineering © 1995-2003 Extreme Engineering®, All Rights Reserved.

We have noticed that with a standard climbing anchor bolt (bolt hanger), it isn't designed to hold carabiners when using the auto-belay systems. The pressure from the auto-belays causes the carabiners, when locked into the anchor bolts, to form notches in the key points of the aluminum and/or steel body. Below are some results from using a climbing anchor bolt opposed to our new anchor bolts designed for the auto-belay system. Many of you are still using the old anchor bolts. We highly advise replacing them with this new design to minimize the damage on your carabiners. The new anchor bolts eliminate the possibility of putting serious notches in your carabiners and making you retire your carabiners early.

Fig. 1



Fig. 2



Gate
malfunctions

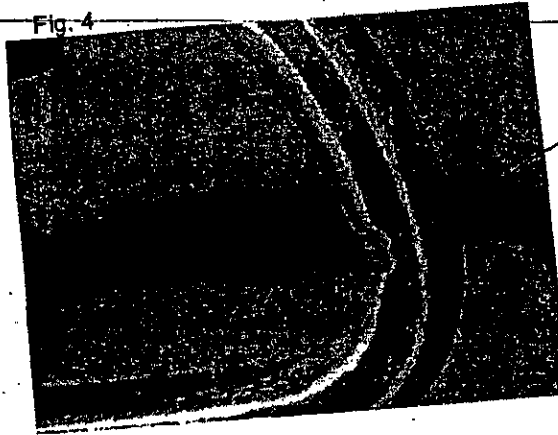
As you can see in Fig. 1 and 2, this carabiner should have been retired a long time ago. We came across this carabiner on one of our customers climbing walls. As you can see in Fig. 2 the locking gate no longer works (note: the green button doesn't pop out of the gate) also the deep notch on the right side of the carabiner was caused by the use of a standard climbing anchor bolt. This notch was created so deeply that with the weight of a 40 lb climber this carabiner could literally break in half! Please don't let your carabiners result in this kind of abuse and if so please replace them immediately! Visit our online store for replacement carabiners.

Fig. 3



Slots

Fig. 4



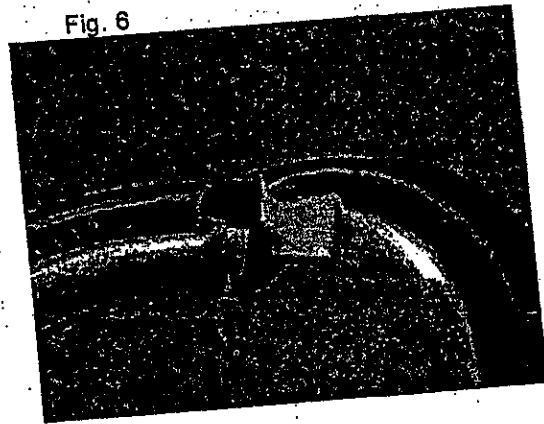
Notch created by anchor bolt

As shown in Fig. 3 you can see how standard climbing anchor bolts create notches in carabiners with their sharp, slotted holes. These anchor bolts are traditionally made for quick-links or webbing for top roping or lead climbing. The anchor bolts were never intended for the auto-belay system. Fig. 4 is the end result of an auto-belay system used on a climbing anchor bolt.

Fig. 5



Fig. 6



With a notch on the carabiner it can crack or snap in half right at the notch. See Fig. 5 and 6.

Fig. 7

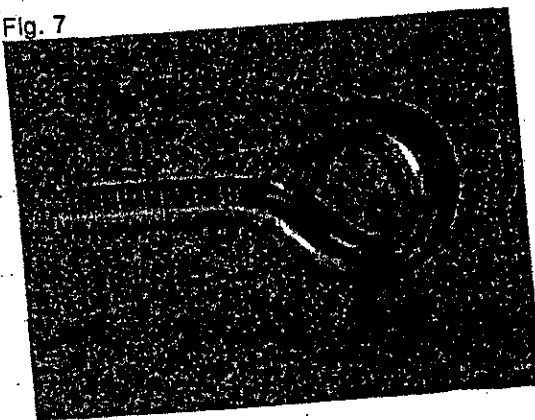
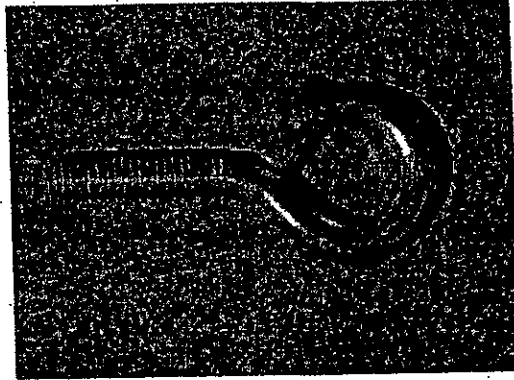


Fig. 8



Extreme Engineering's version of a climbing anchor bolt (see Fig. 7) is designed for the auto-belay system. It is bent in a smooth, round circle, minimizing sharp edges and stress towards a carabiner. They install easily into one of your existing t-nuts on your climbing wall. Just screw them, don't forget to apply a washer, and use them when clicking your cables to the wall.



Auto-belay Anchor Bolt

Eliminate the possibility of damaging your carabineers. Use Extreme Engineering's new auto-belay anchor bolt for your wall. Available on our online store soon. Only \$4.00 each! Call 530-887-1056 to place your order.

http://www.extremeengineering.com/online%20store/e2_accessories.htm



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July 7, 2004

Six Flags Corporation
732-928-8493
Attn: Michael Wright

Dear Michael Wright,

This letter is regarding recommendations for carabiners used with Extreme Engineering climbing walls. As the manufacturer, we have evaluated many different carabiners and have chosen Omega Pacific as our brand of top recommendation. We now supply Omega Pacific carabiners in the wall sales package of every unit we sell.

Specifically, we use the OP76S38Q3, a 7/16" Mod D 3 Stage Quik- Lok Stainless Steel carabiner. This model is used in the industrial and rescue climbing industry where safety and climbing security are the number one priority. The specifications on the Omega Pacific versus the Petzl M18 are as follows:

	Omega	Petzl
Gate Opening:	22mm	21 mm
Major Axis Strength:	53kN(11,925 lbs)	28kN(6300 lbs)
Gate Open Strength:	14kN(3150 lbs)	8kN(1800 lbs)
Minor-Axis Strength:	9kN(2,025 lbs)	7kN(1575 lbs)
Weight:	218 grams	76 grams
Material:	Steel	Aluminum
Retail Price:	\$22.95	\$21.95

Even though Petzl meets our minimum requirements as noted above, our recommendation is that the Omega Pacific provides superior strength and abrasion resistance as steel does not wear or abrade as easily as aluminum does. If dropped, stainless steel is stronger and will not cause internal cracks to the carabiner as aluminum may. We also recommend the Omega 3 stage quik-Lok feature as this provides a triple safety security for our climbing application. For these reasons, we provide the Omega Pacific as standard for our walls, although we do still sell Petzl carabiners to customers who may call and specifically request the Petzl brand for their own applications.

Sincerely,

Marsha Benson
Marsha Benson
Extreme Engineering